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AUTHOR Wangsotorn, Achara; And Others
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ABSTRACT

A study of the relationship of learner characteristics to success in beginning English examined the language aptitude, learning motivation and attitudes, spatial relations, study habits, and years of English instruction of 97 seventh-grade students in a Thai government school. The analysis focused on these variables as they related to the children's achievement on independent-study English modules taught in three instructional modes: visual, auditory, and a combination of the two. Results indicate that the strongest predictor of success was language aptitude, especially in combination with learning motivation. Spatial relations did not correlate at all with success, and experience with English instruction and study habits had statistically insignificant correlations. The auditory mode of instruction was the least effective of the three. Some recommendations are that variables other than language proficiency be considered in developing introductory courses; and that listening lessons be subordinated to visual or visual/aural lessons. (MSE)

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Relationships between Learning Modes and the Beginners' Success in English

Achara Wangsotorn : Researcher

Co-Researchers

Tassanee Sripaipan

Nipaporn Rattanaprucks

Torroong Jarunggidanan

Passorn Singkalwanij

Amata Vejaphurti

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I. Statement of the Problem

Success in learning a foreign language depends on various learner variables. The study of the relationships between success in learning English of beginners and learner variables will pave ways for preparations of materials and the upgrading of teaching and learning processes to best suit the learners.

Researchers in Europe, America and Asia have discovered that learner variables which influence language achievement are composed of language aptitude, attitudes toward the teachers and the target cultures, general intelligence, verbal ability, nonverbal ability, and learning strategies. Besides these variables, modes of learning also explain success in learning a foreign language.

II. Purposes of the Study

The research has the following purposes:

1. Study the relationships between the beginners' success in English and the following learner variables:

    1.1 Language aptitude
    1.2 Attitudes and motivation
    1.3 Spatial relations
    1.4 Learning strategies
    1.5 Years of studying English

2. Study the relationships between the beginners' success in learning English through an individualized approach and the following modes of learning:

    2.1 Visual and auditory modes
    2.2 Visual mode
    2.3 Auditory mode

III. Research Hypotheses

The research has the following hypotheses:

1. The following student variables are related to achievement in learning English through self-study programs of the beginners of English:

    1.1 language aptitude
    1.2 attitudes and motivation in learning English
    1.3 spatial relations
    1.4 study habits
    1.5 years of English

2. The following learning modes are related to achievement in English through self-study programs of the beginners of English.

    2.1 the aural-visual modes through listening and reading
    2.2 the visual mode through reading
    2.3 the aural mode through listening

IV. Limitations of the Study

The study focuses on Grade 7 students in Samsen School which is a governmental school. These students were beginners of English.

V. Research Procedures

V.I Samples and Population

The sample was composed of 97 beginners of English who were grade 7 students in Sam Sen School, a government school under the control of the Ministry of Education. Of the 97 students; 41 were boys and 56 were girls. Some had marginal background in English.

V.II Research Instruments

The instruments were composed of:

1. Standardized tests

    1.1 The Chulalongkorn University Language Institute English Proficiency Test Level II consisting of 6 subparts as follows:

Testing the Listening Skills

Part I: Sound Discrimination
Part II: Sentence Comprehension
Part III: Picture Identification

Testing the Reading Skills

Part IV: Picture Identification
Part V: Sentence Completion
Part VI: Passage Comprehension

1.2 Thai Language Aptitude Test (TLAT Form I Level Ia) consisting of 5 subparts as follows:

Part I: Number Learning
Part II: Phonetic Coding
Part III: Spelling Clues
Part IV: Grammatical Sensitivity
Part V: Language Analysis

The test was developed under the guidance of Dr John B. Carrol originally and later Dr Lyle F. Bachman.

1.3 CULI Learning Strategies Form A consisting of 42 statements for students to check yes or no according to their study habits and learning strategies.

2. Instruments adapted from existing standardized measures

2.1 Attitudes towards Learning English developed by Prapphal, Oller and Byler*. The rating scales consisted of 81 statements divided into 3 subparts with 27 items

2.1.1 Instrumentality divided into 3 subparts: Academic Purposes, Socio-Cultural Purposes, and Jobs and Personal Benefits.

*K. Prapphal, J.W. Oller, Jr., and M. Byler. Affective Measures: Still a Pandora's Box? A monograph published by the SEAMEO Regional Language Centre, Singapore, 1982.

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2.1.2 Integrativeness divided into 3 subparts: Personal Preferences, Ethnic Identity and Self-Concept

2.1.3 Willingness to Work divided into 3 subparts: In Class, Out of Class and Need Achievement.

The reliability of the instrument was established through the analyses of convergence of means within each triplet of statements assessing the same attitude valence, signs of correlations and significance and magnitude of correlations.

2.2 Space Relations Test measuring nonverbal intelligence consisting of 27 items developed from Differential Aptitude Tests Forms M and S.

3. Constructed Instruments consisting of

3.1 Self-study English listening and reading programs consisting of 20 lessons selected and adapted from the Pacific English Series. Each lesson contains a glossary, a text not exceeding 15 lines, comprehension exercises, grammatical forms and a short test. Details of the programs are presented in Table I.

Table I

Contents and Language Points of the Self-Study English Lessons

Lesson	Content	Language Points
1.	Flowers and Fruits	One, Ones
2.	Mana Is Ill	Yes-No Questions
3.	Dates and Months of the Year	Time, Dates
4.	Breakfast	Uncountable Nouns
5.	On Saturday	Present Tense (Habit)
6.	Games	Adverb of Frequency (Every, often)
7.	Visitors	Like to, S-V Agreement
8.	Malees' Birthday	Question Words, Let's
9.	Vichai's Savings Box	Possessive
10.	The Lazy Donkey	Negative, Doesn't like
11.	The School Concert	Passive (It is made of), Adjectives e.g. Excited
12.	The Greedy Cat	Verb of Motion, Continuous Tense

Lesson	Content	Language Points
13.	End of Term	Countable Nouns, Uncountable Nouns (Review)
14.	Tea for Three	Request
15.	Umbrella Village	Location, There is, Has
16.	The Wind and the Sun	Comparison, Imperative
17.	Peter the Cowboy	Adverbs of Time, Adverbs of Place (Review)
18.	Seventy Cats and One Dog	Pronouns (Review)
19.	How Lek Saved His Friend	Past Tense
20.	Going to a Football Match	Modals, Questions (Review)

3.2 The achievement test consisting of 4 parts with 48 test items. The test techniques used were short-answer, multiple choice and completion.

V.3. Data Collection

The steps for data collection were as follows:

1. Administering the CULI English Proficiency Test for grouping the subjects into three equivalent groups. Group I (N = 31) studied through aural-visual modes using both listening and reading programs. Group II (N = 34) studied through the visual mode using only the reading program. Group III (N = 32) studied only through the aural mode using the listening program. Group III students studied in a language laboratory, whereas the other two groups had their lessons in normal classrooms.

2. Administering the study habits inventory, the Thai Language Aptitude Test and the Spatial relations test in the first three days of the experiment.

3. Each group studied for 5 days for a total of twenty hours. Four self-study lessons were given each day, two in the morning and two in the afternoon. At the beginning of each session, the subjects were given an explanation sheet containing glossary and pictures about the story they were going to read, listen or listen - read. Then, they started the lessons which were followed by exercises. To check their work, the subjects checked out the answer key from the supervisor who would explain their mistakes and answer any questions whenever the subjects asked them to.

4. After having completed the 20 lessons, the subjects took a two-hour achievement test according to the mode of each group, i.e., Group I took a listening-reading test, Group II a reading test, and Group III a listening test. The attitude rating scales were also administered on the same day as the achievement test.

V.4. Data Analyses

The SPSS program was used to find the Cronbach alpha for the adapted and the constructed instruments in order to establish the reliability indices of those instruments, i.e., the spatial relations test and the achievement test, while the attitudinal scales were analysed using the Prapphal, Oller and Byler method to find the internal consistency and the reliability coefficients. Construct validity and reliability indices were arrived at through the analyses of convergence of means within each triplets, the predicted signs of correlations and the significance and magnitude of correlations.

The Cronbach alpha analysis indicated the reliability of the constructed or adapted instruments as follows:

- Spatial Relations .87
- Achievement Test .91
- Language learning as a tool .83
- Language learning as a means to communicate .85
- Perseverance .82
- Total Attitudes - Motivation Rating Scales .93

Considerations for approval motive tendency, response set tendency and self flattery were not given to the analyses.

To prove the research hypotheses, the following statistics were performed on the obtained data:

1. Pearson product moment correlations
2. t-test analysis
3. multiple regression
4. analysis of variance
5. principal components analysis: variance rotated factor matrix

VI. Research Findings

The presentation of the findings is in 4 parts:

1. Means and standard deviations of the student variables.
2. First-step analyses of the relationships
3. Analyses of explanatory and predictive relationships.
4. Analyses of the in-depth structural relationships.

1. Data about the samples and the variables are presented in Table II.

Table II

Mean, S.D, N, of the Variables in the Study

Variable	N	$\bar{X}$	SD
1. Years of English study	84	6.698	2.353
2. Age	92	12.989	.763
3. Language aptitude	92	55.880	7.536
3.1 Number learning	92	10.011	3.943
3.2 Sound and symbol association	92	10.174	2.583
3.3 Rote learning	92	12.283	2.649
3.4 Language analysis	92	13.652	2.531
3.5 Grammatical sensitivity	92	9.761	.600
4. Attitudes and motivation in language learning	96	398.708	45.079
4.1 Learning as a tool	96	123.177	15.196
4.2 Learning as a means to communicate with the native speakers of English	96	138.729	18.614
4.3 Perseverance	96	136.802	17.286
5. Study habits	96	29.021	5.275
6. Spatial relations	96	19.260	4.833
7. English proficiency	96	51.813	9.368
8. English achievement	97	32.351	8.531

Table III

Correlation Matrix of the Dependent and Independent Variables

	Variable	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
1.	Years of English	1.000	.087	.041	-.037	-.123	-.095	.000	.008	.081	.136	-.005	.048	.061	.187***	.010
2.	Number Learing		1.000	.162	.125**	.185**	-.033	.656***	-.065	-.037	-.025	-.004	.042	.006	.162***	.053
3.	Sound-symbol association			1.000	.282***	.312***	.020	.628***	.075	.157	.134	.248*	.268*	.251*	.386*	.241***
4.	Rote-learning				1.000	.421***	-.075	.695***	.194	.088	.125	.243*	.223*	.229*	.162*	.470***
5.	Grammatical					1.000	-.012	.682***	.014	.127	.097	.120	.101	.125	.294**	.422***
6.	Language Analysis						1.000	.040	.085	.078	.060	.078	.060	.075	.120	.053
7.	Language Aptitude (2+3+4+5)							1.000	.073	.115	.115	.218*	.230*	.217*	.378***	.420***
8.	Study Habits								1.000	-.013	.262***	.356***	.462***	.414***	.183	.142
9.	Spatial Relations									1.000	.207*	.155	.029	.144	.162	.165
10.	Attitudes towards Learning as a tool										1.000	.646***	.669***	.860***	.213*	.258**
11.	Learning as a means to communicate											1.000	.683***	.892***	.319**	.326***
12.	Perseverance												1.000	.891***	.286***	.279**
13.	Attitudes and Perseverance (10+11+12)													1.000	.313**	.329***
14.	English Proficiency														1.000	.388***
15.	English Achievement															1.000

2. First-step analyses of the relationships.

SPSS program was used to find the Pearson product moment correlations among the dependent and independent variables. Table IV presents the correlation matrix.

The correlations in the triangle are inter-relationships among the components of language aptitude and total aptitude. The relationships with total aptitude were significant at .001. Language analysis,and Number Learning however, were not correlated with other aptitudinal attributes, nor with English proficiency and achievement. On the contrary, Sound-Symbol Association and Grammatical Sensitivity were significantly related to English proficiency and achievement at .05 $\sim$ .001. Besides, Rote Learning was also significantly related to English achievement at .001.

The correlations in the rectangle present the relationships among the attitudinal and motivational variables. The intercorrelations were from moderate to high (.65 $\sim$ .86) and were significantly related with the beginners' English proficiency and achievement at .05 $\sim$ .001.

The correlations in the smaller rectangle present the relationships between study habits and attitudinal-motivational variables at .01 $\sim$ .001. Study habits, however, were not correlated with English proficiency or achievement.

Spatial relations were only significantly related with Learning English as a tool variable at .05. They, however, had no relationships with other attitudinal-motivational variables, English proficiency nor English achievement.

Years of English revealed no significant relationships with any variables.

The relationship between English proficiency and achievement was significant at .001 with r_{xy} = .388, indicating that both variables shared 15% common variance. Both variables were significantly related to other variables, except for years of English, number learning, language analysis and study habits, with which they did not have any significant relationships.

3. Analyses of Explanatory and Predictive Relationships

Multiple regression analyses were performed to establish the explanatory and predictive relationships among student variables, modes of learning and English achievement through a self-study program.

Table IV

Multiple Regression Analyses of the Relationships among Student Variables, Modes of Learning and English Achievement

Source	R^2	r	df	SS	MS	F
Student Variables and Learning Modes	.533		7	3080.855	440.122	11.555**
Student Variables	.210		5	1216.780	243.356	3.889**
1. Language Aptitude	.074	.329	1	428.616	428.616	11.253**
2. Attitudes and Motivation	.023	.356	1	133.388	133.388	3.502
3. Study Habits	.001	.090	1	6.018	6.018	.158
4. Spatial Relations	.004	.208	1	24.872	24.872	.653
5. Years of English	.000	.020	1	.419	.419	.011
Learning Modes	.323		2	1864.075	932.038	24.470**
Residual	.467		71	2704.334	38.089	
Total	1.000		78	5785.189		

** $p \leq .01$

From the table we can conclude that

1. Student variables and modes of learning were significantly related to English achievement at .01 ($F = 11.555$, $df = 771$, $p \leq .01$) and shared 53% common variance ($R^2 = .533$).

2. Student variables could explain English achievement by 21% and had a significant relationship at .01 ($R^2 = .210$, $F = 3.889$, $df = 5, 71$, $p > .01$).

3. Language aptitude was significantly related to English achievement at .01 and could explain English achievement by 11% ($R^2 = .108$). Its relationship with other variables was also significant at .01 and could explain them by 7% ($R^2 = .074$, $F = 11.253$, $df = 1, 71$, $p \leq .01$).

4. Attitudinal and motivational variables could explain English achievement by 13% ($r^2 = .127$); but when combined with other variables, the relationship with English achievement became insignificant and could explain it by only 2% ($R^2 = 023$, $F = 3.506$, $df = 1,71$, $p < .05$). This was so because attitudes were related to other variables causing low unique variance (r_{xy} with language aptitude = .201, to study habits = .389, and with spatial relations = .194).

5. Study habits had no relationship with English Achievement ($F = .158$, $df = 1, 71$, $p \geq .05$) and could explain it by only 1% ($r^2 = .008$), and also showed very low correlation with other variables ($R^2 = .001$). This might be explained by the fact that study habits had quite a strong relationship with attitudes and motivation ($r = .389$).

6. Spatial relations had no relationships with English achievement or other variables. This variable could explain only 4% of English achievement and only 1% of other variables.

7. Years of English had no relationship with English achievement ($F = .011$, $df = 1, 71$, $p \geq .05$), nor could it explain English achievement ($r = .020$, $R^2 = .000$). This might be caused by the similarity in the subjects' years of English and the short span of the experiment.

8. Learning modes had significant relationships with English achievement at .01 and could explain it by 32% ($R^2 = .323$, $F = 24.740$, $df = 2, 71$, $p \leq .01$).

   To compare the English achievement means of the three groups learning through the aural-visual modes, the visual mode, and the aural mode, Scheffé Tests were performed revealing that learning through the aural-visual modes was not significantly different from the visual mode; however, English achievement through aural-visual modes and visual mode were significantly higher than the achievement of the group using only the aural mode.

   ($\overline{X}_1 = 36.647$, $\overline{X}_2 = 35.581$, $\overline{X}_3 = 24.656$)

   The above findings might also resulted from the subjects' familiarity with learning through the visual mode more than with the aural mode. However, before the experiment the three groups were equivalent in their English proficiency and the aptitude in listening measured by the sound-symbol association and the number learning subparts of the aptitude tests.

4. Analysis of the in depth structural relationships

Principal Components Analysis - Variance Rotated Factor Matrix were performed and yielded the following results.

Table V

The In-Depth Structural Relationships

	Variable	Factor 1	Factor 2	Factor 3	Factor 4	Factor 5	h^2
1.	Number Learning	-.171	.033	.606	-.162	-.039	.425
2.	Sound-Symbol Association	.141	.420	.526	.060	.071	.482
3.	Rote Learning	.209	.724	.062	-.119	-.229	.638
4.	Grammatical Sensitivity	-.096	.735	.112	.139	.122	.596
5.	Language Analysis	.089	-.048	.042	.062	.915	.853
6.	Attitudes toward Learning as a Tool	.723	.129	-.026	.456	.007	.749
7.	Attitudes toward Learning as a Means to Communicate	.803	.248	.032	.177	.064	.743
8.	Perseverance	.883	.101	.049	.005	-.035	.793
9.	Study Habits	.681	-.084	.033	-.328	.111	.592
10.	Spatial Relations	.035	.127	-.001	.839	.071	.726
11.	Years of English	.114	-.386	.569	.332	-.340	.712
12.	English Proficiency	.233	.309	.637	.199	.209	.613
13.	English Achievement	.287	.609	.113	.248	-.005	.528
	Eigen Value	2.672	1.970	1.411	1.304	1.093	8.450
	Mean Communality	.206	.152	.109	.100	.084	.650

The variables which bore in-depth structural relationships were:

Factor 1: Attitudes and Motivation (Learning as a tool, Learning as a means to communicate and perseverance), Study habits and English achievement through a self-study program.

Factor 2: Language aptitudes in sound-symbol association, in role learning and in grammatical sensitivity, years of English, English proficiency and English achievement.

Factor 3: Language aptitudes in number learning, sound-symbol associations, years of English and English proficiency.

Factor 4: Attitude toward learning English as a tool, study habits, years of English and spatial relations.

Factor 5: Language aptitude in language analysis and years of English.

VII. Conclusions and Recommendations

The findings can be concluded as follows;

1. Student variables could explain English achievement by 21%. The independent variable having the strongest relationships with English achievement of the beginners in English was language aptitude. Even though attitudes and motivation had no predictive relationship with English achievement according to the multiple regression analysis, these variables were related to English achievement in the Pearson product moment correlations ($r^2 = .31$). Thus, language aptitude and attitudes-motivation towards English learning were related to English achievement of the beginners in a self-study program.

2. I.Q. as measured through a spatial relations test had no relationships with English achievement.

3. Years of English and study habits were not significantly related to English achievement implying that success in English can be achieved through effectively managed programs, eventhough short, such as an intensive one.

4. Learning modes could explain English achievement by 32%. Learning through the aural-visual modes and the visual mode significantly yielded higher achievement scores than learning through the aural mode only. However, a significant intervening variable worth to be considered was the subjects' familiarity with reading more than with listening and their equal aptitudes in listening.

5. English proficiency, English achievement and language aptitude had related in-depth structural relationships. The communal factor among the three variables might be general intelligence which was related to years of English, but not to intelligence as measured by a spatial relation test nor to study habits and attitudes toward learning English.

6. Attitudes and motivation and study habits had relationships with English achievement, but not with English proficiency, years of English, and language aptitude. Therefore language aptitude and attitudes might not have any in-depth structural relationships. The conclusion is in line with Krashen (1981) who stated that language aptitude was related to learning whereas attitudes and motivation were related to acquisition.

7. Attitudes towards learning English as a tool, as a means to communicate and perseverance were in the same factor indicating construct validity and concurrent validity of the instruments. Language aptitudes, however, were grouped into 3 factors by the principal component analysis, not into 5 parts as in the test format which indicate the test face validity.

8. English achievement and proficiency had both similar and dissimilar factors in their in-depth structural relationships. The similarity was that both measure general intelligence. The dissimilarities were that (1) English achievement was related to attitudes and motivation, whereas English proficiency was related to language aptitude: number learning and sound-symbol associations measured through the aural mode, and that (2) English achievement test shared a common factor with attitudes and motivation indicating

that the test might be related to acquisition more than the English proficiency test which was related more to formal learning.

Recommendations

1. Other student variables besides language proficiency should be considered in planning a course for beginners such as their language aptitude, attitudes and motivation.

2. Self-study listening lessons could very well be used in activating skills courses which are supplementary to the core courses since the research yielded positive results of using listening to enhance English proficiency of beginners of English as well as attitudes towards learning the language.

3. The self-study listening and reading programs should not contain materials of the same level of difficulty; the former should be easier than the latter in view of the students' familiarity with learning through the visual mode more than through the aural mode. Glossary and pictures should be included to make the lessons easier and more appealing.

4. Control of student previous language exposure should be made.

5. Comparisons of English learning through the three modes should be made for teacher-taught programs.

6. Comparative studies on the roles of student variables in language learning should be conducted using intermediate and advanced learners as subjects to discover whether there are any similarities or differences with beginners. The studies may shed more light on language acquisition processes.

7. Studies on the influences of learner variables should be made with learning the mother tongue and other foreign languages besides English in order to help shape language curriculum planning by using supportive elements existing between learning the mother-tongue and a foreign language.